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EXAMINER

WAKS, JOSEPH

ART UNIT	PAPER NUMBER
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2834

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 0703

Application Number: 09/848,032
Filing Date: May 03, 2001
Appellant(s): GEE, THOMAS SCOTT

DYKEMA GOSSET PLLC
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 19, 2003.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 15-18 stand or fall together because appellant's brief includes a statement that this grouping of claims stands or falls together. See 37 CFR 1.192(c)(7).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. **Claims 15-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kitada et al. (JP 406048189 A)** in view of **Gropp et al. (5,555,871)**.

Kitada et al. disclose a hybrid vehicle comprising: an internal combustion engine 1, an electric traction motor 8, a storage battery 7, a battery charge state detector 6, an engine temperature sensor 5, a vehicle system controller 4, 9 receiving temperature and battery state of charge signal, an engine control unit 4 operating the engine in a fail-safe mode when the engine temperature exceeds a predetermined threshold and halting the engine and powering the vehicle solely with the traction motor if the battery state of charge is greater than a predetermined temperature threshold. However, **Kitada et al.** do not disclose the engine controller operating the engine on alternating cylinders when the engine temperature exceeds the predetermined temperature threshold and the battery state of charge is less than the predetermined charge threshold.

Gopp et al. disclose the engine controller operating the engine on alternating cylinders when the engine temperature exceeds the predetermined temperature threshold for the purpose of protecting the engine from overheating under low load condition or the cooling system failure.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the hybrid vehicle as taught by **Kitada et al.** and to provide the engine controller operating the engine on alternating cylinders when the engine temperature exceeds the predetermined temperature threshold as taught by **Gopp et al.** for the purpose of

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protecting the engine from overheating when the traction motor can not replace the engine because the battery state of charge is less than the predetermined charge threshold and is unable to feed the motor.

Re claims 16, and 17, the recited features requiring the engine control to operate the engine during the vehicle operation under speed exceeding a predetermined speed threshold or during the operation of the air conditioning system when the temperature of the engine exceeds the predetermined temperature threshold are inherent to the disclosed structure since it will direct the engine to alternate the cylinders at any operating condition when the engine temperature exceeds the predetermined temperature threshold and the battery has insufficient charge threshold for supporting the traction motor.

Re claim 18, the combined HEV discloses the system as claimed. Claims 18 that merely recites connecting and using the disclosed features together is inherent to the disclosed structure.

(11) *Response to Argument*

Appellant's arguments have been fully considered but they are not persuasive.

Although applicant's disclosure is directed in general to a hybrid electrical vehicle (i.e. vehicle driven by an internal combustion engine and an electrical motor) in detail it addresses only the engine part of the system and in particular the problem with engine overheating conditions.

In the case of the hybrid car it is well known in the art to operate the vehicle at certain conditions with the electrical motor only. Applicant discloses that when engine is overheating

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(in case of lost of coolant for example) the engine will shutdown and the vehicle will be operated solely with the electric motor. This feature is clearly disclosed by **Kitada et al.**

Furthermore, applicant discloses that in case of engine overheat and depletion of batteries the engine will operate on alternating cylinders i.e. exclusively on engine. This situation is clearly addressed by **Gopp et al.** Examiner submits that it would be obvious to one of ordinary skills in the art to improve the vehicle driving train disclosed by **Kitada et al.** with the **Gopp et al.** disclosed system since after the battery became inoperative the hybrid system became an engine driven system and the teaching in prior art related to engines will apply.

Moreover, **Gopp et al.** exactly address the problem of operating overheated engine when no other means to move and to bring the vehicle to a save destination are available. This teaching is appropriate to any engine, be it one in the engine driven vehicle or one in the hybrid engine/motor combination vehicle.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


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July 23, 2003

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